Notebook Series -- Pocket Notebooks
Notebook, PN-18-00-00

The one dated entry in this pocket notebook is from May 1919. However, the book was probably begun late in 1918 or early in 1919. It was used by Edison to record ideas about business matters, experiments to be tried, and other tasks to be performed. Many of the entries pertain to Edison's idea of using lithium hydroxide in the Lalande primary battery, his interest in locating new sources of lithium, and his plans to construct a lithium hydroxide plant to supply his own needs and to meet the growing industrial demand. At the beginning of the book is the address of an unworked lithium mine in South Dakota, along with a notation to "increase Capital stock Mining Exploration Co to pay my expenditures at Par." There are also entries regarding mica mines in western New Jersey, as well as Edison's renewed interest in the regeneration of used storage battery components and the development of a process to extract potash (used in batteries) from feldspar.

In addition, there are numerous entries relating to electromotograph ("EMG") experiments and to the use of the device in the chalk telephone. One entry contains a reminder to "look up old note books for all notes on chalk phone & copy," while another mentions Edison's plan to "retry the old Etheric & use phone & chalk phone." Also included are notes on disc records and test recordings, along with entries indicating Edison's continuing interest in submarine detection and other military topics. The inside front cover is inscribed "Ent in final book May 6th 1919." The pages are unnumbered. Approximately 160 pages have been used.

USAID PN-(18-00-00) ★2996

Sent in final draft
May 6th 1979

Mebulluorgan Co Mining Eng Illinois
Name Old Etta mine
owned by

C H Karnman Hill City
S Dakota

not being developed

Increase Capital Stock
Mining [illegible]
To pay my Handkerchiefs at
Par,

Jesse O Harper

An Copper [illegible] immediate
between Cup & Chas
Can be obtained [illegible] Reading
Cup on RH or Kl [illegible]
G Kruse Dec 17 1893

(57)

Gypsum acts as a flux a
bout as much of Caf as fluoride
Cryolite is corroded

New Reagent for Na, Mg + Al Salts

5 pts Crystalized Tin Chl
10 pts Dissolved in 200 cc
much of a coal of KOH
[illegible] as well
[illegible] nearly but not
completely a clear solution
[illegible] standing
[illegible] more
[illegible] 5 pts sol + 10 pts
Hgl, set aside for several
hours, or until [illegible]
any liquid containing the
dissolved bases of NaOH
or [illegible]
NHgl [illegible] not the same

Possibly Spodumen heptafluorate
+ Amblygonite needs Caf,
also NaCl mix coal with it
ground fine might help

Hydrogen sodium Carb is
recommended for decomposition of
Silicates in place of Sodium
Carbonate or the Potassium
[illegible] of K + Na Carbs

~~My procedure stops~~
~~for the present~~

~~[illegible] as [illegible]~~
~~more NaOH to make it melt~~
~~Still [illegible]~~

Metallic iron from our Iron
Mycaceous dissolved out by
boiling Mercuric Chloride
which dissolves the iron
& leaves Fe_3O_4 Fe_2O_3

Beryl from Mesa grande
has from 0.46 to 1.68% of
Li_2O

Compounds of FeO_2 with
Strontium

Other mixt of Cono solutions of
Ferric & Strontium Nitrates
evap to dry & dehydrated
residue ignited at 100°C
[illegible] with HNO3 in order to
[illegible] analyzed
Strontium Compound with
Ferric & Lanum hydroxide
brot up to 400°C

in oxygen. But alas slowly
acted by nitric oxides given off
O, but may be soluble
in water.

By ignition in Sulphur Nickel
crystal from Lonsonite, Haematite
Xanthosiderite. hydrohematite
goethite, Crystalline & amorphous
also ignited iron pyrite
Used for Li_2O

Iron labs [illegible] rapid qlx
determination –
Lithium Soaps
Lithium hypochlorite Dakin Sol
for treating
[illegible] for [illegible]
Titration of Acids in Labs

L OH, use crystals of any
ammonium sulphate salt
put in NaOH with or without
Aluminum & let it stand on
stove – boil. to use a copper
salt which ~~so~~ will form
an insol salt with NaOH or
KOH. Thus to get slow action
[illegible] of the
[illegible]

L OH

Try making Crystalline
Cu OH by precipitating
the dry salts grounding up
fine with ice & in alcohol
Thick glass to melt
slow –

Try 3 glass 10% CuO – Thru 180
64 glass, & bring to very
bright yellow, ~~[illegible]~~ [illegible]
by drop & cell –

Put a yellow heated 4 glass
into melted NaOH
for 10 min – take out &
put in water –

Also break up in $\frac{1}{4}$ @ $\frac{1}{8}$
chunks & try – [illegible]
[illegible] to [illegible]
see if [illegible]

Beryl – Glucinum Salts
great [illegible] of Extraction
of [illegible]

Lead or other glaze 200 mesh
moulded by Hydraulic, can
probably be burnt in clay
holders & kept alright to
take place of hard-trubbed
in Alkaline Cell specially
if loaded with Ba Sulphate
or pure granity —

Resin from Balsam Canada
is insoluble Alkalies

Sandarach Resin is not
sol in Alkalies

Pigments - by precipitation

Brunswick Green	Green
Sulphate of Lead (Mineral Paint)	White
Chrome Yellow	Yellow
Red Lead	Red

Oxidizing linseed should be
heated to 300° @ 350° for
and the Dryer added, slowly
2 to 2½% carbonally
should not dont add it
bottom & burn oil in
The heat & oxidizing [illegible]
in the oil. Try Red lead
+ [illegible] [illegible]
Pb O2 + [illegible]
much [illegible] [illegible]

Dromedar Varnish some records with linseed having 10% of a Dryer P6 oz after thorough oxidation put on the Red Varnish with Red & also Chromate Lead or Red Lumpblack also with some clay –

Also a layer of Dalby Clay & Linseed before oxidation then oxidize & put the Red & Graph. Condenito Varnish on gives a cushion –

We need 130 tons net 3% Li_2O ore or equivalent per month from mines based 1000 cells daily & renewals,

Dalby

Try Experiment on small Mixtures or mixer hot of oxidizing pure Linseed oil ½ & Ratio ½ until it gets ropey. & then remove to then work out & put in Clay with proper amount of the dope & powder up again & oxidize solid –

If not possible in mixed use one of the Cells pots with Clamps & hot 300° fahr

Colloidal Carbon action 2 gms Increase 2000 H_2SO_4 24 hours then in 500 water, then changed to acid red by SO_2 & then in solution to get assorted see p. 198 Chem Soc Bibliography 1914

(15)

Cuprous Oxide [illegible]
Dissolved in Ammonia
+ add Ammonia yet under
Cuprous hydroxide separates out
Ammonia [illegible] in [illegible] ?

[illegible] Manganese [illegible]
[illegible] Manganese [illegible]
[illegible] Manganese [illegible]
Manganese-Manganate, Wad

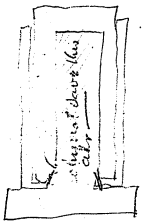
[illegible] Jouvenaline, Barbaloin
in Bicarb. [illegible] in [illegible]
Kamala between Calamari &
San Borja - L. 0.56.

When buying Chalk phosphates
+ have a
small hole in Lacho from
Chalk to [illegible] Ammonia
it will [illegible] Mass
[illegible] out of [illegible]

Harry Miller who do
that get my reports
of personal accounts

Perhaps Lithia will
take Phos out of iron
L. not reduced by Carbon

Warner



See Warner about
wet salt & distilled
water - Mercurous salt

Iron pyrites. Corn plant
Kaliba 1/10 10 —

Solubility

	Cold	Hot	MP
LiCl	63	129	605
NaCl	35	39	804.C
KCl	28	56	772
Caesium Cl	161	270	646
Rubidium Cl	76	138	726
Gypsum $2H_2O$			900

	BP
LiCl	1360 —
NaCl	1490
KCl	—
Caesium Cl	—
Rubidium Cl	—

Sol al chlorides
Sol al alkalies
Sol al chlorid
Sol al chlorid

Orthophosphate lithium
Easily sol in Carbonic
Acid water
1 pt dis in 2539 pts H_2O

Ferric orthophos 1500 Bichromate
Ferrous 1000 Class

Ferrous Lithium phos Triphylline
Easily sol acids not cold
Accumpg to Rose

Ferric Pot phos. Insol acq
Lead phos " Vanth

~~Wrangles chas had to stroll not with Mercurium~~

~~practices heretofore about Nitrifying Mercurium~~

Important —

If Phosphate Li is decomposed by CO_2 gas in water, liberating phos acid — say Carbonate Li only Can't get concentration in presence of phos acid & then get Crude Lithium Crystals, which is very small in small amount of Water.

One analysis of Amblygonite

Phos Anhy	47.15
Alumina	28.43
Lithia	7.03
Soda	3.29
Potash	0.43
Fluorine	8.11

Ammonium Manganese Phosphat absolutely insoluble — see if so in Nitric HCl or H_2SO_4 Could decomp phos Li & precip phos out of so not def need

Walter Miller Mike

2 dec 10 lines Music
10 lines no music then
10 lines ~~[illegible]~~ and - Music
fairly good — for OK
treating quantities

Mack Mine at Rincon

San Diego Co of ½ m SE of Pala
Sec 25 T 10S R 1 W
San Bernardino Meridian —
1 1/2 m NE of Rincon Stors
in Int Canyon 2 at 1960 altitude

Get all patents relating to Potash from Feldspar

Dally Mark some
Lunnedell with enough
PbO for it to go easily
in several hours at
212 Fahr. –

Then was can may
Clerk make record
& Clerk & Chen
put me book at
212. + then Vancouver

Gypsum 1 part dat in 500 pts Ag
also dissolves in HCl.

Amica found in granite in
Cape Ann Mass –

Si	51.50
Al	16.70
Fe_2O_3	1.97
FeO	7.98
Mn	0.34
Mg	0.76
K	13.15
Lithia	4.06
SiF_2	3.42
	99.97

Very easily fuses in the flame of a Candle

Thus a clue for making Lepidolite more easily fusible –

Amblygonite [illegible]
generally sold on [illegible] Li [illegible]
18 mos —
Varies from 10 to 45 [illegible]
per Cent [illegible] since 1913
in 1908 $ 20 to 30 for Kunzite
[illegible]

Powder up Lep Lolite
then 200 [illegible] for ignition
then put in [illegible] iron
pot with [illegible] bring
up to 50 lbs pressure
using a gauge [illegible]
[illegible]

Dipluoride potassium
salt [illegible] in [illegible]
use heavy sealed [illegible]
tubes [illegible] pressure

Amblygonite stone 200
then ignite then
leach with hot chloride
magnesium — this would
form insol silica thing
by Chl [illegible] —
either the Cl precip
as [illegible] — or
[illegible]
[illegible]

Sulphate Li separates from
[illegible]

Sulphate Mg due 20 pts [illegible]
[illegible] Cryst [illegible]
Sulphate [illegible]

Carbonic Acid

Sesquioxide Al_2O_3 or ferric
don't absorb CO_2

Carb K Na or Li in 100 pts
water — if CO_2 used
must have 125 [illegible]

[illegible]

Phosphates

Barium Tri phos	Insol – sol d acid
Di "	0.01
Mono "	Sol
Pyro	0.01
Calcium.	
phos $Ca_3(PO_4)_2$	0.003
Di	0.028
Pyro –	Slight sol
Mono	4.00
Cupric Phos	Insol
Ferric Phos.	Insol – 0.067
Ferrous "	Insol sol d acids
Lead phos	0.000014 insol Nat
Lithia phos	0.04

Trig mixing Charcoal or the Leps 2 times charcoal + bring up on open piece of cracker or asbestos or dump in water -

Mg Phos
$Mg_3(PO_4)_2 4H_2O$ 0.025
pyrophos insol. sol acids

Manganese Phos
pyro- Insol. S acids

Tin phos Insol

Strontium
acid phos Insol SolNH4 Salts

Zinc phos, All Insol, some Sol acid,

Aluminum Phos Insol, Sol Al + alkalis

Water saturated with CO_2 dissolves the Li_2CO_3 more freely than water does

Li_2CO_3 1.53 pts in 100 aq (cold)
0.72 boiling

$BiCO_3$ $LiHCO_3$ 5.5
5.5 in 100 pts aq at 13°C 1.1

CO_2 100 aq dis cold 179 cc to
Hot only 93 at 20

practically 90 cc at
boiling temp

see of [illegible] leg to acid or
[illegible] leg [illegible]

Sulphate Al. sol in cold
water insol in Hot
water boiling throws
down [illegible] insol
Salt in all

Acid Sulphate Barium Sr Ca
Mg Sol water need of
Neutral Salts Alkalies
Soluble Water

Carbs made by adding
Excess of Carb Ammonia
to $LiCl$ or ammonium carb
with the sulphate
or precipitating Li sulfate with
aqueous Ba Carb & decomposing
the precipitated carbonate by
ignition - Li_2O not damp
by heat
Li_2CO_3 dis in 100 pts
[illegible] in [illegible]
[illegible] in 1.28 pts of Boiling

Put in tremblers Rag plates
[illegible] + [illegible]
test 20% + [illegible] in Exp to
note [illegible] in solution

~~Lepidolite Ker 10K~~
~~4 Li — then for [illegible]~~
~~its necessary to use~~
~~310 [illegible] 30%~~
~~[illegible] are [illegible]~~
~~100 [illegible] K 40~~

Anthrapurite
Ignite, dissolve in
HCl — precip phos as
phosphate Ammonium
separate the alumina
Residue after [illegible]
alk + dissolve [illegible]
all bases — by
[illegible]

Pneumatic test
Ignite, quench, grind to
[illegible], ignite, quench
grind [illegible]
test, then drive off H_2SO_4
by prolonged ignition
[illegible]

Test the Greenwhorles
in which [illegible] is now
in for Li

Pyridine dissolves LiCl
but not other salts & Chlorides
Etc

Phosphoric Acid.

Add Carb Soda only a certain amount. This will throw down Alumina & at same time the remaining phos acid will form a basic salt & precipitate, if Na_2CO_3 dont work try K_2CO_3

Phos Barium seems to be insol in water or acids 1 pt in 20570 aq – at 22.5 C. if in presence of Na Chloride + Na Chl Combined it dissolves in 4302 pts aq

Phos Barium is partly decomp when boiled with Na_2CO_3 or K_2CO_3

its insol in sol of phos soda or Ph Chl –
Readily sol in dilute Phos acid, HCl & Nitric with formation of readily sol Monosalt, thus it acts more readily in proportion as the acids are more dilute

Lime Bibasic phos lime
sol 1 pt in 1 million aq
it must not be cooled
[illegible]

Phos Ammonia + Magnesia
Sol. 15293 H_2O.
If water Contains Ammonia
Sol 44000 pts
This seems best salt to
get out phosph from
Ambligonite Alumina
Made usual by Evap
to dry & possibly dehydrated
or least -

Solubility not lessened by
any other salt than the
phosphates

Mason says it almost
absolutely insol in
pure ammonia
1 pt in 60000 -

Silicates of Alumina of all
Kinds probably have an acid
affinity & that the reason
they always contain alkali
5 to 12% -

Try double ignited Lep with
best ignition with Equivalent
of 8 grms Caustic Soda
to 10 grams Lep

Also double ignition
& powder, digest with
8 grams Caustic soda
fairly Concentrated
that but kept moist
So Na displaces Li
Then test, also add
water & exhaust & test
they add to clear water
HCl & test,

Make some fusions with ferrous carbonate reduced to ferrous,

also with dried sulphate of iron a

also Dried ~~[illegible]~~ iron hydroxide, Ca hydrox. Little Caustic Na

~~Also with [illegible]~~

Lepidolite.

SiO_2	Al_2O_3	K_2O	Li_2O
50.6	28	11.0	5.0

Water	7	fuses 2 to 2.5
1.5	6.00 =	

Averages

Ferrous 16.

somewhat 1.3 Mn

Lithia in defs over

Tan from 1.27 to 5.67

7 varies 2 to 10

Spodumene

Si	Al	Ca	Li_2O	aq
64.57	27.81	0.4	4.95	0.45

K	Na	Fe_2
0.12	0.80	0.8

Says fuses at 3, not acted upon by acids,

Amblygonite

P_2O_5	Al_2O_3	Li_2O	Na_2O	flux
48.5	33	9.0	0.4	11 to 17.5
Loader	4@5			

fuses at 2

in fine powder dissolves easily in H_2SO_4 more slowly in HCl.

Orthoclase Si 65 Al 18

Alkali 14

Basic Acetate Aluminum insol aq
Mono & di hydroxides of aluminum
insoluble acids or alkalies
Tri hydrox insol aq soluble acids & alkalies
Oxide insol aq sol conc H_2SO_4 + HCl

Phosphate Aluminum insol aq
Sol Alcohol + Alkalies

Thursday should make
Spodumen fuse easy
Tray 6 @ 8½ ~~then~~ above
10% alkali perhaps 15% alkali
[illegible]
Lepidolite

Si 51 Fe 30 Mg 2.5
Na 7 – fuses easy

Si 56 Al 12 Fe 11 Mg 8
Ca 2.25 K 9.2 fuses
easily to a glass (green)

(Cryophyllite, a Mica in
Granite of Cape Cod discovered
by Josiah Cooke Chemist
Harvard)

Si 51.49 Al 16.77 Fe 1.97
Mn 0.34 Ferrous Fe 7.98
Mg 0.73 K 13.15 Li 4.06
Si fluor 3.42

Melts in flame of a
Candle. fluorine not expelled
at red heat. Sol dilute acid
leaving the Si

When an excess of Ammonium Carbonate is added to a solution of Ferrous & Cupric Chlorides a yellow liquid is obtained which gradually deposits a mirror of metallic Copper

[illegible] cement on [illegible] [illegible] needles [illegible] $CaCO_3$ [illegible]

following hydrogen over [illegible] to [illegible] Zinc Remains [illegible] given On the [illegible] Zinc the [illegible] [illegible] Zinc is a Catalyst [illegible] with or without [illegible] R. S. [illegible]

From this it is obvious that there may be a suspicion that Carbon put in solution that will increase the amount of Zinc Oxide that can be held in solution —
Note the Carbolized brot. out by the Clay was to bind the 100 g also by CuO —

Perhaps Can put on a problem in Schools with Charcoal something that will precipitate the Zinc Oxide out & still leave the Metals to dissolve more Zinc

Tip Schuyler says bel red in Amyl Alcohol

[illegible] NH_3 [illegible] not [illegible])

Then add various things to the sols [illegible] [illegible] can be [illegible] [illegible]

Get 3 or 4 [illegible] good mechanical [illegible] [illegible] [illegible] than 120 [illegible] [illegible] 2% Alkali [illegible] water [illegible] then take one & put in renewal Sol & Run it, to see if Metal will be Rehydrated

Lepidolite Melts 930° C
1654° Fahr

[illegible] [illegible] C.

Sol of Ni containing Chromic Acid & Alkaline [illegible] is Electrolyzed. 0.1 amp for 50 hours, NiO_4 is deposited + [illegible] $K_2Cr_2O_7$

A Holland Compt R 1903 136 p 229 231

Heat the 3 [illegible] with Aluminum [illegible] for 2 days [illegible] Replaces the Alkali [illegible] ([illegible] 300 C)

Bull US Geo Survey 1902 Stevens

Decomposed Li_2Cl_2 by heat
Page Lubran Compt R 1903
136 – p 1245–7 Li Cont begins
Decomp at 600° C. Vapor
tension of Li_2O is so high
at these temps that it can be
completely volatilized

Leachwith
NH_4Cl also, Sol Sulphides
$ZnCl$
$MgCl$
$BaCl$
$SrCl$.
KCl.

Try Leach with
SO_2 also CO_2
$NaOH$,

Very dilute Sulphate + ammon
or such sol as OH used to
cast Cryolite on OH_2
Add lime in drops, to a
very dilute sol of the precipitate
over a period of days —
Commercial cryolite volatilizes
the most as almost soluble
in alkali sol —
Compt R 1903 136 p 1444–6

Try ignited [illegible]

Fuse some Orthoclase feldspar
double fusion + grounding
dec up in crucible with H_2Cl
like dec [illegible] + warm
[illegible] ground
some fine in [illegible] only
put on lime test both warm
some Cold — 3 Appls

[illegible] Bromide [illegible] is
[illegible] Acetone
[illegible] Chloride [illegible]
[illegible]

[illegible] 30 [illegible] heavy
[illegible] Co.

[illegible]

Ka Na quantitatively [illegible]
[illegible] Ca [illegible]
[illegible] no [illegible]
[illegible]

Printing & Working for blind.
use an ink with large friction
+ work by friction.

see if sol of NaCl we add
H_2SO_4. Can we get full amount
of HCl out of salt,

Try it on 10 grams Specimen

~~Chromic Barium Yellow~~
only compound Chromate

~~Naples Yellow OK.~~

~~Ultramarine~~ (Cooled)

	m p	100 water Sol Cold	Hot	S
Carbon CO_2	610	382	Very	Sol at
Calcium "	825 D	0.0013	0.088	0.1 in 100 CO_2 water
Lithia "	618 @ 700	1.539	0.728	insol.
Mg "	350 D	0.01	—	2.2 CO_2 water
K "	909	89	156	Insol at
Na "	849	7	45	" "
Li Silicate	120	Insol Boiling	S Decomp	Sol dilute HCl
NaCl	804	1490	1500 Cold 30	39 Insol Alcohol Ether
KCl	772	1500	28	56 Sol at Alcohol
LiCl	602	1360	63	129-24 at 100 Insol at
CsCl	646	~	161	270 Sol at
RbCl	726	-	76	138 Sol at
[illegible]	744	-	59	154 Sol at
MgCl	708	Red Heat	52	66 Sol at
BaCl	955	-	31	62
Gypsum	900	-	0.24	0.22 Sol at Insol
$CaSiO_3$	1512	-	0.009	Sol at

Magnesia Mixture

55 grms MgCl
70 " NH4Chloride

650 cc water
and enough Ammonia of Sp G of .96 to bring it to 1 Liter
1 cc precipp P_2O_5 0.04 grms

[illegible] rock 100 hours some [illegible] of [illegible] [illegible] [illegible] [illegible] [illegible] HCl [illegible]

War –

Scrap cartridges which sinking in water strike bottom explode. Time the period between time of drop & time of explosion by stop watch & listen in water phone. This will give the depth,

Get up 2 [illegible]
with the 3 grms 10 grms
[illegible] double powder
with 5.5 grams H_2SO_4
250 cc water.

[illegible] equivalent acidity
of SO_2 [illegible] cold [illegible]

Also with proper proportion
[illegible] H_2SO_4 to make HCl –

Atomic wt

Aluminum	27.1	Mercury	200
Antimony	120.2	Molybdenum	96
Arsenic	75	Nickel	58.7
Barium	137.4	Nitrogen	14.04
Bismuth	208.5	Phosphorus	31
Boron	11.0	Platina	194.8
Bromine	79.96	Potassium	39.15
Cadmium	112.4	Rubidium	85.5
Caesium	132.9	Selenium	79.2
Calcium	40.1	Silicon	28.4
Cerium	140.25	Silver	107.93
Chlorine	35.45	Sodium	23.05
Chromium	52.1	Strontium	87.6
Cobalt	59	Sulphur	32.06
Copper	63.6	Thallium	204.1
Fluorine	19	Thorium	232.5
Glucinum	9.1	Tin	119
Gold	197.2	Titanium	48.1
Iodine	126.97	Tungsten	184
Iron	55.9	Uranium	238.5
Lead	206.9	Vanadium	51.2
Lithium	7.03	Zinc	65.4
Magnesium	24.36	Zirconium	90.6
Manganese	55		

~~Have Legal Dept write Ottawa about laws on mineral rights patented since 97 M~~

Energetic Decomposition point of Sulphates

$FeSO_4$	480 C
$Fe_2O_3(SO_3)_3$	560
$PbSO_4$	905
$Al_2O_3(SO_3)_3$	639
$MgSO_4$	972
$CaSO_4$	1200 at arb

Solubility of SO_2 gas

at 20 C	Water dis 8.6 % by vol
30	7.4
40	6.1
50	4.9
60	3.7
100	0.1

~~See if Chandler has lost legal Dept go ahead on Cincinnati Explor Co~~

If a silicate contains K like Glass the K cant change no Spectroscope but if gypsum added the Lime combines with the Silica + the SO_4 to the K. + you get the K spectrum

Why Cant Gypsum + salt be added to the O of ores + fuses forming Ca Silicate + sulphate Soda of gas pre HCl, try

Make 2.5 gal 30% 25 oz

Try a solution of Ammonia salts to decompose MnO2 sal to increase solubility or increase tailings

Fred

Fuse 25 grms Lep
12 " platin P
12 " Salt
12 " Lime,

Ditto doubly
" Iodad
Try Lep 1st to see if fuses
goes

Also 25 Lep
25 Salt
25 Lime
If fuses OK – Try doubling
Iodad

Dunwoddie to varnish
blanks with Blanc
fix to bring out
black blank spaces

Order 2 Direct Vision
Spectroscopes like
mine, if not have send
to England –

25 Lep
37 Platinum
37 Salt

25 Lep
37 Quin
25 Salt
12 Lime To Stay
water long off –

	1/2 Tons	$15.00 per ton	Labor	$15.00 per day	Coal	Minerals	Crusher	Total	Costs	500 lb Cyanide	500 lb Cyanide 2nd N. Agency
3	9	135	500	135	36	50	135	791	1,00	15	
4	7	105	300	105	34	50	140	734	917	20	
5	5.3	79.5	290	195	32	50	132.5	663.5	63	25	
6	4.8	72	287	72	31	50	144	656	82	30	
7	4	60	265	60	30	50	144	629	788	35	
8	3.3	49.5	285	49.5	28	50	[illegible]	600	75	42	
9	3	45	283	45	28	50	150	601	75	50	

Thank Labor can be got to 100. daily on 4/10 ore

	Hours per week
Crusher 3 days 1 man	30
Heating Cyanide + Dumping	55
Ball Mills " "	55
Furnacing + Melting	55
Dumping Slags + Cupelling	55
Filler pressing	55
Evaporator	55
Chemist	55
Cancharging + Evaporating	55
Gent Laborers	110
Pipe fitter	55
Engineer	72
Fireman	72
Night man	84
Dept of mines	55
3 men off-mine	165
2 Crushing	110

About $500 week

Get copies of all mineral Reports of Canada for 25 years back

KS passed into NaOH containing ZnO precips at least if Cadmium it redissolves? Lelande

Test all the Grand Lithium Kung Called for Lithia.

~~Have only~~ Fred will make another crucible + Dec or 2 days swap down solution and See what salts Crystalize out - also dry out by electrical (M) & recrystalize & alance

Get a list of just what Machinery we have suitable for Lithia plant,

Mend ourself find all the Mica Mines in N Jersey from Chas Lake Reports + part slips in

Take a crucible with 20% graphite + Crystalize the hydrate + using a nickel anode Charge it to see if get CuO_2 hydroxide thus discharge with Zinc

Make Crystalized Cobalt hydroxide if possible also of course Ni hydrox Crystalized

Ch.1

Change A4 to 120 amp
slowly then see if it lasts
Change by time —
Iron pump OX dissolved in
Electrolyte overnight

Mica Mine 3 Miles North of
Hewardville on west bank of
Merrifs Creek, Harmony
Township Warren Co

Also on Scotts Mtn
1 mile North of Broadway
on SE side of the ridge
near the road to Springville

Meeke Rome black hydrate
wash & dry well + press
disk — also mixed with
glass + ignite yellow
for Vulcanite also in pocket
not Corrugated —

3%	Li_2O	Equal to	96 lbs dry	LiOH
4%	"	"	128	"
5%			160	"
6%			192	"
7%			224	"
8%			256	"
9%			288	"

2000 cells 90 gms each 400 lbs dry
LiOH required daily 24 days month
9600 lbs dry per month.

3%	ore	daily -	4.16	Tons ore required
4%	"	"	3.1	"
5	"	"	2.5	"
6	"	abt	2	"
7	"		1.78	"
8	"		1.56	"
9	"		1.38	"

Try a CuO disc with Reg 20%
Electrolyte in proportion to the
disc weight & add same proportion
LiOH as ore disc in Battery —

If good try the Crystalized Hydrate, with Litt'le Alcohol.

Dilute Try Prussin alone without. Ignited using 24 or less of Oxidizer the same way — to see goes way up.

See how much Citric Lime is taken up by Calc to form a soluble Oxychloride —

If there is Village between Metallic Fe in Kettle & the Nickel plating Then plate some steel strip with mud & wash in H_2 + try —

PHOSPHATES

	Cold	Hot	Alcohol	Alk.	Acid	Water	
$AlPO_3$	insol	insol	Sol	Sol	Sol	Sol	amorphous
$Ba_3(PO_4)_2$	insol		Sol	Sol	Sol	Sol	
$Ba_2P_2O_7$ Prem	0.01		insol	insol	Sol	Sol	
$Ca_3(PO_4)_2 4H_2O$	0.003	Stcomp					
$Ca_2P_2O_7 4H_2O$ prem	S Sol		Sol				
$HgPO_4 4 aq$	insol	0.067					
$Fe_4(P_2O_7)_3 3 aq$ P_2O_5	insol				Sol		
$Fe_3(PO_4)_2 8 aq$	insol					Sol	
$Pb_3(PO_4)_2$	0.00001	insol			Sol	Sol	
$Li_3PO_4 H_2O$	0.014						
$Mg_3(PO_4)_2 4H_2O$	0.0205				Sol		
$Mg_2P_2O_7$ prec	insol	insol	insol			Sol	
$Mn_2P_2O_7$	insol				Sol		
" " 3 aq	insol						

	CaCl	Hcl	Phosphates alcohol	alkali	acid	NH_4OCl
K_3PO_4 ortho	S sol	sol	insol			
$K_4P_2O_7$ 3 aq Pyro	Sol	V sol	insol			
Na_3PO_4 12 aq	28.3	V sol	—			
$Na_4P_4O_{12}$ Meta	insol	insol	—	sol	sol	
$Na_4P_2O_7$ 10 aq H_2O	5.4	93	insol			
$SrHPO_4$	insol	—	sol			sol
$Zn_3(PO_4)_2$	insol					
$Zn_2P_2O_7$ pyro	insol	—	sol			sol
			Fluorides			
AlF_6	sol	sol	—			
AlF_6 7 aq	insol	S sol				
NH_4F	V sol	Decomp	insol			
BaF_2	0.163	S sol			sol	
CaF_2	0.037				insol	

Fluoride	Cold	Hot	Alcohol	Cold	Acids	Alkali Salts
$IrCl_3$ HgF_3	S Sol	Sol	insol		sol	
HgF_2 4 aq	S Sol	Sol	insol			
one HgF_2 4 aq	S Sol	—	insol		sol	
PbF_2	0.064				HNO_3	
SnF_2	S Sol				HF	
MgF_2	0.007	insol	insol	insol	HNO_3	
MnF_2		Dec	insol		sol	
MnF_2 6 aq	insol		insol		Sol	
KF	V Sol	V Sol			HF	
KF 2 aq	V Sol	V Sol	insol		"	
NaF	V Sol	V Sol	—		Hot insol	
NaF 2 aq	40.012		S Sol		Sol	
SrF_2	S Sol	S Sol	insol		sol	
ZnF_2	S Sol	Sol	"			
" 4 aq	"	"				

NaCl + Magnesium Sulphate decompose each other dry or in solution, if chilled down to —4° Cent Na_2SO_4 crystallizes out. The mother liquor can be boiled down to $MgCl_2$

$MgCl_2$ is decomposed on heating although incompletely into MgO + HCl —

Dilute solns favour as detectably poised reactions. On account of small solubility of CaO any solution may be considered very dilute,

If MgCl is used this is different and it should be added in very slight amounts, otherwise to reversible reaction will stop its action, as long as

The products of the reaction are removed from the cell by becoming recirculated the electrolyte will contain

Lyndon Hero & Cell made up non oxidizable with Everything implanted including grids Connections To poles & test for building charge

Dolly [illegible] Lyon

[illegible]

[illegible]

[illegible]

Freitell punch for Li Asbestos
Rescu

Work on

Etheric Experiments recorded and
Chalk phone perfected Chalk Audion
Speaking Section
Chemical recording paper
Clay emell
Pallech from Felspar
9th Symphony
Lithium Lederlay
Building 101
Soundings by Galatt depth bomb
Sectionism Lecture
Auto firing War vessel guns
Camera lounge (vocal)
Dry Alkalum Cells -

see if 9 perforated Blank & Varnishing with Condensed

Lelande Electrolyte
put in 10% of Every
Compatible Colloid both
with Soda 20% & KOH
20% — to increase solubility
of Lime Ox

Meadowcroft get
½ doz bbls Lead glass
Sewer pipe & tube

Try Glass with lime in
presence of def Chlorap & alk
organic matter sugar,
to increase solubility of the
lime —

10 Machine Cycle —
Opr works 45 machines

Loading 30 sec
Bleach 35 sec
air Cool. 240
305 seconds —
589 in 5 hours max.

Lelande Chemical —
Rosin Soap —
Silicate Soda

Lithia — at Boiling Temp
Magnesium hydrox 21 pts dissolved
in 100 pts water — 1 to 4

Sol ChlCa boiled with slaked lime dissolves it [illegible] [illegible] [illegible] products [illegible] [illegible] of [illegible] [illegible] [illegible] [illegible] other Chloride [illegible] [illegible] [illegible] [illegible]

[illegible] [illegible] [illegible] Ca(?),

Work up a device whereby the ore is in beaker + the water is pumped or filtered + run thru the Lime + filtered back so lime never gets mixed with the ore.

Try 10 grms Lepid + lime water Then after ½ hour filter off [illegible] the water thru lime in filter paper back to beaker again

Fred Ott Rig up a stirrer for Amblig Experiments on other hot plate (Chromelconium) —
Maybe best to put some coarse sand in —

Try an Amblig - for 2 hours boil Lime + Salt —

Filter then dry somewhat & grind in [illegible] gently to rub off the precipitate adhering + put it back with fresh water + salt 2½ g. for another period say 3 hours & do this till [illegible] no more comes out,

Maybe

1) Amblig 250 cc Water saturated with SO_2 put on hot plate [illegible] [illegible] — 500 mlg salt

Selenite — Franklinite —
see if Manganate or NaOH
or KOH form double salt
in Selenite Lorraine more
Zone

~~Try 10 analog in rotating device
10 salt 10 lime~~

~~ditto 10 analog 10 CaCl 10 lime~~

~~" 10 analog 10 Cal 5 NaOH~~

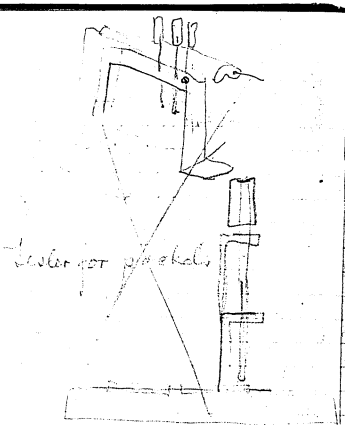
~~" 10 analog 10 CaCl 10 MgCl~~

~~10 " 10 Soda alum~~

~~10 " 15 Bi Sul Soda~~

Try Chalk or dependable
with CaCl + also pass CO_2
from Recarb which is
family set —
Caption Modern work
in water containing CO_2

Madsen
Why Silicate Soda +
Silicate Lime in regard
precipitation NaOH to
make a glass, precipitate
to stop spending



Try making a Disc blank
by welding the [illegible]
in well flow-[illegible]
remove [illegible] slowly [illegible]

Soluble Ferric Oxide
a Basic salt perfectly
sol water.
5 to 7 Molecules ferric ox
dissolve in water & chloride
to clear sol. needing to
heated or diluted with
aq. without decomposing
10 Molecules Fe_2O_3 to 1 Fe_2Cl_6
are perfectly sol after
[illegible] solution

Roasting iron in presence
with Kacl [illegible]

Perhaps [illegible] Fe_2O_3
with Salt get a
[illegible]

After powder is ground & sieved to sized put in a mixer & add some Clean Linseed oil to cover the Rosin & make a powder flow —

According to Sourset
Experiments to put powder in uneven size & hole & then try to produce a flow by adding something —

Sulphate Mg decomposes NaCl giving HCl — which Mg is in Native this secretion is used 2 of MgSO4 to 1 NaCl

Sulphate forms first heated in a porcelain glass with HCl & some NaCl part of Mg is volatilized as $MgCl_2$ & add common as follows

Evaporate 1000 cc of the Ambling Alum Salts recovered from residue

Leach 10 ambling flocks with 10 grams H_2SO_4 Conc then add another 10 grams Ambling Lees put with decomposes more Can be seen by Check method —

[illegible] 10 [illegible] with 20 [illegible] Sulphate

[illegible] (Mg) has improved drying preparation to Linseed [illegible]

Rosin forming powder proved by 5% Caustic Lime [illegible] harder

(21)

Immediately [illegible] of
hole in blank put in
cup full same size as
hole on top —

Try 10 ambling &
[illegible] &
2 Fermon Sulphate
& few drops H 2.50 of

Try Ambling 10 &
Cold Sol 7 grms
Sulphate Alumina

Dalley's Blank

Clay	1400	
Linseed	700	
Resin	700	
Black	160	
PbO	70	$ 229.80

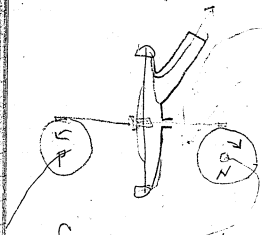
Wt of about per blank 500 grms

1 Hour in Kilper
5 " Oxydizing
2 " Ball Mill —
Puts thru 40 mesh —

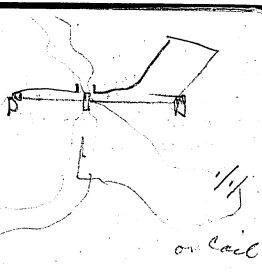
20 drops 1 ft 2 drops
2 ft —

Klein Chocolate Co
Elizabethtown Pa
Almond Chocolate

Find a number of cheap doublesalts with graded strength of acidity for deoxidizing –

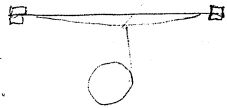


Condenser should be used to stop condensing currents thus conserving precision –



Passing 20% KOH thru a Capillary platinum tube decomposed to Graphite are great precautions hence Platinoid & measuring frothing by the Voltage of Electrolyte to Reqd be observed

with Chalk plate
use same sign idea as
disc but stiffened
much



Make Rockwork
drum for Elec Graf —

Select best Emg Accumulator,
+ Run Curve of
deformed pressure
forming them —

Also mix various
dopes in the making

such as clay, Viscose,
alkalene shellac,
alkalum Condensite
Resin, alkalens Cellulose
sugar etc in various
proportions —

Have Bayer Hardy
test limits of
Audibility with
Reg Rec & Emg —

Rig up Navy Wireless
set with antenna
on top of House &
test Emg + Rec
with Audion

Misc —

Try Cumarone & Shaw oil, Linseed also with [illegible] of waxes —

Try Acid Sodium Sulfate

2 mols of NaCl 117 pts

1 " H_2SO_4 98 pts

If [illegible] acted on at [illegible] [illegible] [illegible] to require [illegible] [illegible] the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] remaining salt.

Lalande — find some solid substance not sol in NaOH, that will combine with the ZnO & form a solid to remove ZnO from the Zincate perhaps Caustic Lime, Sr or Ba may do it. Ca is pbly best on account slight solubility —

I have some saturated Zincate. Try $Ca(OH)_2$ using CuO & new Zinc in it, if get nothing add Caustic Lime & other things this is fine way to find a substance

Mica –
try Ca Sulphide –

Storage Coat,
Mix 5 10 15 20

30 & 50% Ba Sulphate
with 7% thoroughly
Make pockets Spray
ditto Range –
Try cold test also

Miller try 7.5 Sp.
Quarry – equite, reduce
H, & test

Also take Reg 7%
pockets & dip in
Concentrated Sol &
precip BaSO4 in pores
of Cc –

D Bat – 60% Reg 7%
40% of high temp mix
Metallic looking not
self healed mixture
ditto Nickel instead
iron, ditto Aluminum
flour Metallic –

DB. once used 7.5. Thinner
goes – see if can make it
Chemically instead of
Electrolytically –
"ous"
There owth & Lead be
used in Lubes –

Also use powder 7.5
& Chromate & by
Current in Tubes. ?
do it thoroughly

Make some Viscose from Lithia hydroxide in place of NaOH, use absorbant Cotton —

Fill a Reg A 4 Cell clear full of slaked lime, mix, and using 18% NaOH —
Test time " also
Plaster Paris — 1st trying
New plaster Paris acts in
NaOH 18% + LiOH,

A compound MgO, Fe_2O_3 black shiny Octahedrial Crystals Easily formed passing HCl gas over a mixture of MgO + ferric ox Heated.. This may be idea for reduction by H + also shrinkage for 6 Part LiOH make some of many other Compounds of ferric ox & other Chromates known Bernheim — 1888, & Rosseau 1891 found

Try Iron alum to decompose Ferricyanide -

A double salt of NiK_2F_3 is obtained by heating $NiCl_2$ with KHF_2 in platinum crucible
fine green plates,
Reduce liquor in H to make Ni flake for plating — The Carpet Lining [illegible] in air

Lott making

Try accelerator would flow at 275 @ 300 -

for Cleaning cylinder scum dip silk cloth in Collodion & dry — or nitrocellulose or Linseed oil, or Balata, or gelatine —

In Emf after washing & smoothing trick & get [illegible],
Oil the cylinder with soap & draw out

Arsenate the surfaces of copper & brass & platinum stick that already stick to steel —

Emg — try KOH in different solvents glycerine & others. Begin 10P liquids first.

Also 15% KOH dissolved in nearly Conc Chloride K. & most sol K salts. try LiOH also mixes of KOH, LiOH NaOH. Sodium Nitrate

see four chucks holders and platinum 4/21

grind up discard chucks from 20 mesh & remount & see if OK — quote Drumming. Ball mill with 1/8 & 1/2"

Look up old notebooks for all notes on Chuck photo & copy

Make Mond reactor with spring coil for driving chuck plus — details Connect to 250 clock motor.

Make 4" chuck plus with stroboscope center for Pt

Ultra violet beam + vibrating reflector + 50000 sec oscillation for phone or Radium ray or X ray that could be rolled to strike vac tube grids

Retry Kr and Etherio + use phone + check phone,

Try Boric acid or Borax in Cu O cell

also Mercuric

Dr of Wash Wlg Chicago 1/16 Christ several used as a Condenser although [illegible]

See tube also X ray tube check phone

also

Eng.

Try Lenses also -

Eng

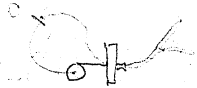
Radium also

X Ray

was not the

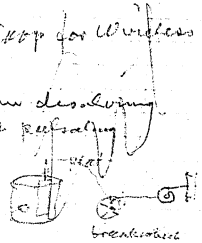
Eng

+ all Chemists Friends



adjustable Loop for Winders

A crystal in dissolving
should give pulsating
Energy



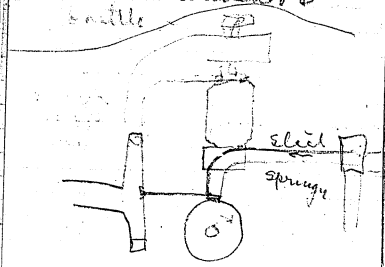
to get quick results put
fall the K Crystal balls
in at once [illegible]
Water to stir
[illegible]
warm water with
Saturated Soln
Crystallizing –
drills showing [illegible]
& dissolving [illegible]
& Wedges by words

See if Solid Carbonate Soda
& Solid Caustic Lime not
imported with in rolls entirely
be reduced to Caustic. If
Carb Soda has no water use
outside water or steam –
this will do away with
crystallizing with only
10% solid –

Work up the Spitz Kaus
on large scale –

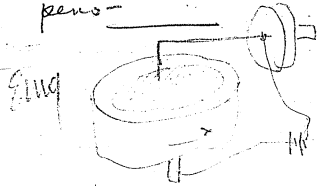
also 6 beakers of
Arabic 10 & transfer
1 pot full Hour see of
sk bicarb Soda
Amm – & 6 2044 also
Use Lime – Spoon
& keep to be never

I quite yellow white down of the side of pod such as
& Cuttle & French use
[illegible] 1/8 [illegible] see of leg
Medium [illegible] of
bottle

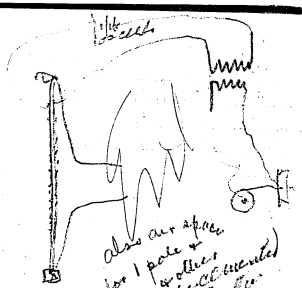


Longitudinal waves
of long waves the strings
[illegible] & [illegible]
friction with small [illegible]

see what can be done
with a Zinc as a transmitter
disturbing the polarization
Current, standing
also runner using
Bell & Zinc for [illegible]
also different solutions
also Al & Sandalwood
pens —

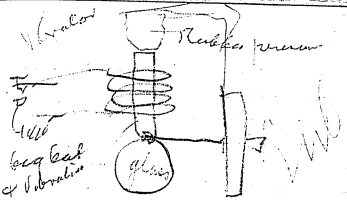


Zinc [illegible] Cup rotated

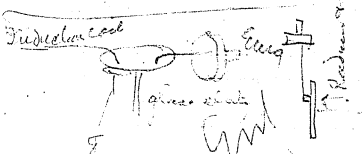


Rubber disc, fine foil on
each side

Vibration varies Electro
metric force change



def metals, Crystals
Etc



Change grain & reason
reading EMF & repression
Mica-Etc also Ultra
Violet & Red Light &
X ray Radium speaks
with shutter

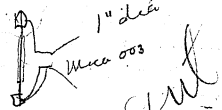
Design Tube Aluminum Cell
also, hand Lamp Exciting
with Lamp Charger —
for trade !

cell with say 1½" dia
1/8" dia
.005 thick

Evaporation
Holder

Rotoscope

atom drawn thru
die 18 K into
phenol thalein —
in air

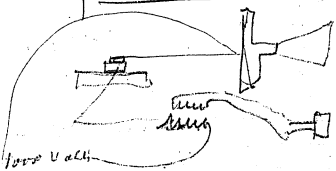


Spark, showing of varia
by [illegible]
disturb the charge
+ amplify

Lelande, start Experiments
with other quad ~~[illegible]~~
other increase greatly
but separately the usual
impurities to see
just what impurities
hurt developing of
Zinc

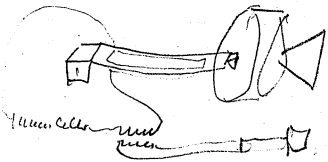
helanda makes steels on several makes of Common Zinc & correct its defects by adding something to the Electrolyte.

Tellurium point & say album film or celluloid for recording wireless at great speeds using Audion amplifier

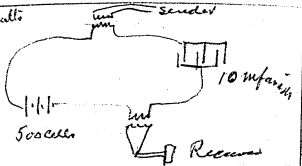


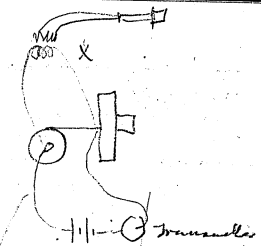
Mica between diaphm Electrode & bottom Elec sliding

due to vibration. Stresses mica & ~~wood~~ at different parts & cause Electrofication Rush



Vibrate & Change Electrification





When wave comes no self induction to Chalk Current opens when O on pen, lets Current then to X -

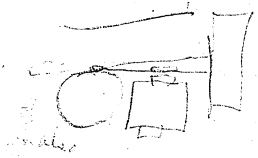
---

for screens use 1/32 mesh or less silk gauze meshes stretched on frames, the powder the substance of screen slightly larger than 1/32 + put on screen + shaded with Vaseline

Crystal [illegible] Z Electroscope - End & side to take advantage of dropping of then legs weak, head X, Fig + XYZ rays vibrated on + three Crystal - Chalk placed detect)

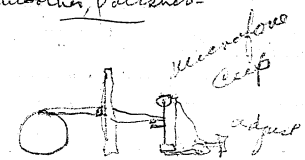
Definitely determine with standard Chalk stable Conditions the best pen mixture to use, want it very hard so can use very narrow pen or ball -

Also make Exact
measurements of Resis
Dulwyln Currents
Voltages, amp. also
Currents by notation
These Exact measurements
are necessarily of no
a Movement



Make friction magnetically

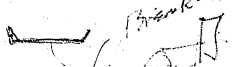
See of Can turn, chalks
smoother, polished-



friction connection

Dully - tiny wooden -
~~Stone~~ paper wax, hard
Tallow, Candlehorn -
with Rosin - wood oil
Rape seed, Benzene

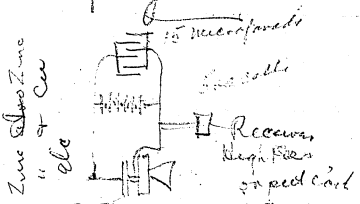
Try say an acid salt in Cells then wet a plate with an alkali or other salt & dep in solution, Recount on Elec precipitates.

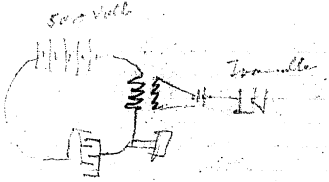


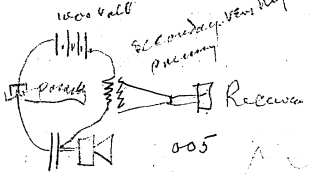
dish to precipitate in other not on metal of dish

Using the Wood fibre & Rosin in sufficient amount to flow well put man on No 30 Cabinet again –

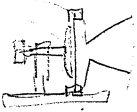
See what is being done on regenerating old Cells, if nothing start it up again –

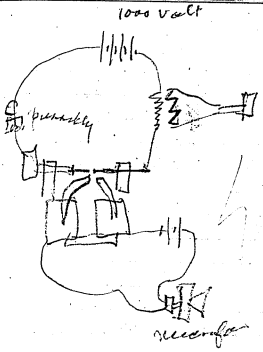




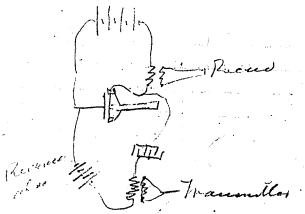


or





Try Oxidizing Rosin
by H_2SO_4 & $KClO_3$ chromic
Alla — cells.
Answer



Possibly Dra of mica
Hard Rubber alum
glass celluloid & other
things - & possibly
Crystals - also. Those
Crystals that gave
Voltage by pressure &
also Zinc Sulphide discs
(Ie) Electron Calamus -

Cut from Crystals Slo
discs & put of metals
on Each side & 1 ap
to get Current until
good one found - Fluorite
agate, Electron Calamus

Williams

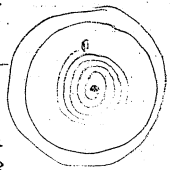
Make some Sensitive
Calcium with
some impurities & get
X ray actful & find
if impurities increase
sensitiveness / small
fusions in Crucible
in presence of
impurities -

If Organolacous smell
is a ray -

Run down more bucks on paper over tin. Think I have an approach made —

Look up & collect the X+1/2 approaches John Ott made for me —

Je - Bottom keeps Res thins down, Various K avenues in 100 deg C 5.9 : 1

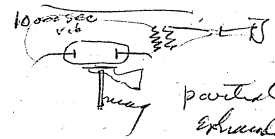


Selenium Very [illegible] Tellurium [illegible]

Hard Rubber dia or sulphur free film of a high res conduction, 0.001 thick or less, high voltage for

Varying Res by heat & cold due to [illegible] of dopes ~~[illegible]~~ possibly [illegible] or, Dye medium Stellar Res film must be very thin to get heat & cold initially possibly [illegible] & [illegible] total [illegible] Valuta, = Rh phos, Tellurium

Try Hg in CuO plate say oxide, so more solved for oxide, so can impregnate plate think voltage be better



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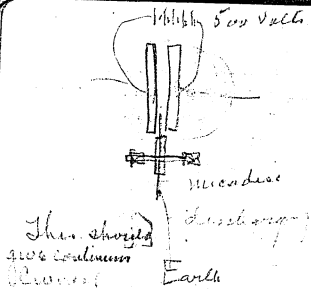
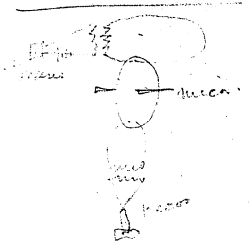
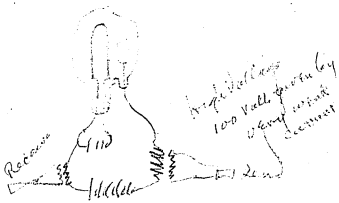
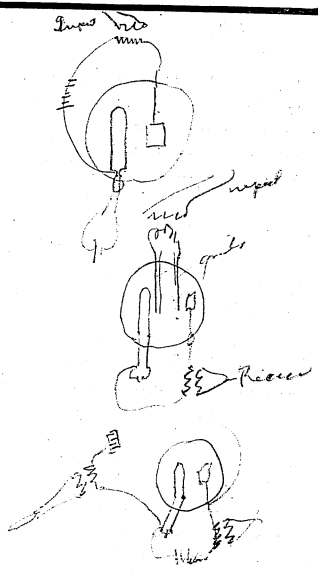




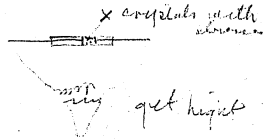
Finely divided acid precipitates like WO_3 should be made as Chalks & Lead with acid Electrolytes – with different specs –

It may be that ~~the~~ absorption of H + OH in the palladium is an unprofitable process in Chalk & Lead





Think Coherers work by static -



Use lamp to see how Current acts in Chalk telephone under various conditions

Watching Max conductance for chemical agents automatically

get Vac tube that will
Continuous Voltage discharges &
discharges at 10 to 15000
second. Think Cyril Elec
have some, find out
what Pattron is.

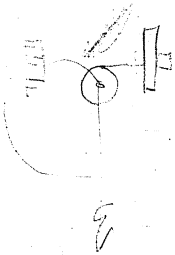
Rec of charged Rubber
on glass rod held near
Aredron tube affects
it & how much a
distance away

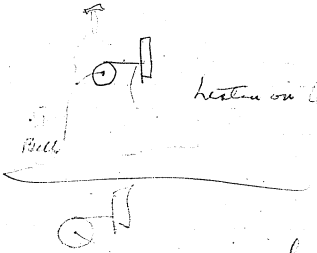
test current between
Aredon tube wire &
plate without tube
in circuit — & all
kinds others —

Chalks in series
connected all to
1 dynamo — dittos
wireless —

Try many cells
& make chalk stay
dynamo & test in
Ckt a Coil to see
effects resistance
when constant
current flowing
Try OX plate cells &

Try [illegible] in iron screws
from Mint for thin plates
also Cakes like Chocolate
so can be broken in
sections, put in pockets
to get rid of crushing Wrapping
also Cakes like chocolate
+ reinforced + reduced to
Fe by compressing iron wire
then cut + used in plates



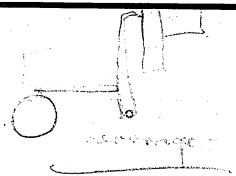


Letter on leather

Magnesia cylinder
Oxidized on surface by
flame — then compound
with Mercury very light

Dills Aluminum, Zinc Cadmium
Tin + other oxydable
metals — also

Platinum Vermilion coat
with Various Enamels
Etc — film by Electrolysis
Lead Cylinder + Sponge Pt —



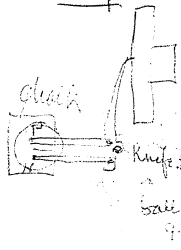
Varnish japan paper with Condensite Varnish Dry & Condense to Rubber Strips or over then press in shields for Dirigibles, Cured pulley or not Cured any feather

See of 6/4 well hardened Para Cumarone

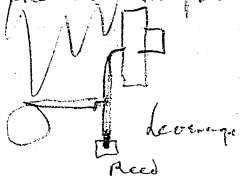
See what Linoleate of Lead is like

Make mix of acetate Magnesium & acetate Iron 60 of both, ignite & reduce in H for bulling

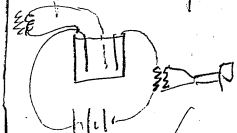
~~Dip in screen~~
Magnesium Cylinder for Elec Cord with Oxide electrolyte in KOH, — Hydroxide, Dry also Oxide by heating



Make a more sensitive
Diaphragm to little cup of
the Bell Microphone -
probably shrinked disc
So rubber gasket not
necessary as I doubt
slant Rubber gasket on
use Rubber of a solution
not affecting rubber
gasket could be found

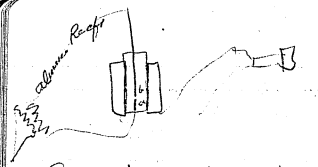


If Now theory might then

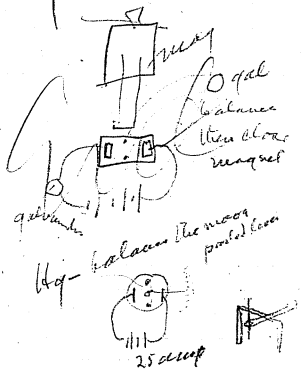


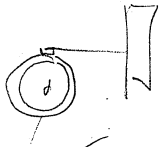
This cell with electrolyte
slight or strong showed
absorption. May be
necessary to have any
high Res electrolyte -
so can use 100 cells

The grid probably should
be a substance quite def
from P, so most of current
go on P + not on grid
for instance grid of
aluminum + P of X4Z


aluminum Roof

Different iron at a, b, thus effects coil – use permanent mag –

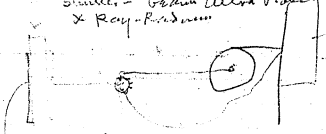

mag
equal balance
thin clear magnet
galvanometer
Hg – balance the mass pointed down
25 amp



Mag 0001 thick shellacked on the cylinder

Put Cathers of high dielectric Capacity but Conducting. Thus allowing Current high V thru the cathers – now insert a rectifier in ~~series~~ this allows 1 way Electricity – it cathers

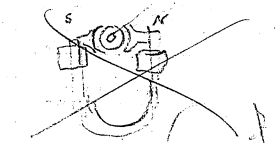
Shutter – Vacuum Ultra Violet
X Ray – Radium



Sulphate

break wheel

also an Efflorescing Cryst



Try sides of holder of different made of different Metals & use same solution –

also try Reg Sodium with various different Salt Solutions –

Want to get a gradefy Chalk, on solution

Make Chalk absorbed fused Silicate K or Na various proportions –

Make Silicate Na with powders to make Cylinders for Energy

Light

Curved Surface by reflection

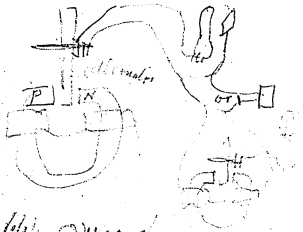
Tellurium etc

Diffract very light

Lens

micro

Rotated Nicol Prism



1/4/4 Microfon.

Magnetic amplifier –
of Crystal detector

Double tube

Using Tin foil detector by
quelled the thermionic
Run down connected trouble
when passing down
tin – Sandaway
Connecting from the

Urania John Ott make me
a cabinet with several
metals on to be covered
with paper also a
new connected to
Dea to detect to
any difference of frequency

Probable Sulphur
not crystalline fall gives
ray better than crystalline
tin the frequency
frequency frequency

Sulphur may be same
thing – also crystalline
leaves gives a ray

Possible detector
by Eng or Thermo or
gal or phone on
Thermo, amplifier to
shutter

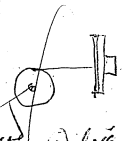
(134)

Try chilled Zinc + chilled Cu plate black vapor on Photo plate, Zinc + for Red long time see if get photo -

Use Audion + try effect of rays from diff substances striking the air space, also grids with 256 see shutter to see if Electrons are affected.

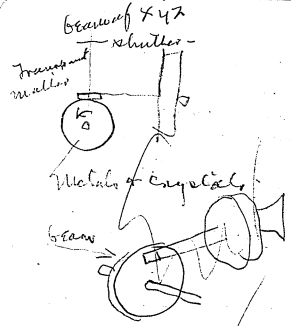
Use E effect + see if current is affected by rays. Etc also use magnet

A4 - pack it full of Carb magnet about 40 mesh + dry + deshy + see how it holds charge + also Bismuth if it vibrates up good.



highly polished Coated distilled Varnish thin, some pressure on pen see if Current + X-Ray effects it

Patent Pending charge breaking of these Vars

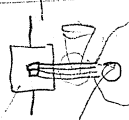


Daily Stirring Potash & Rubber mixed Linseed oil

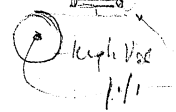
Daily use of Scrap Rubber as oil in Hot Linseed also Aniline —

Rubbed Tin —

Uranium must give out a Ray —



Thermos Glass exploded Worked by Voices



both contact varied

Aluminum plate 1 X 2
put in sickle[illegible] sol a.
formed for 1 min both sides.
do same — Then —
wash rest a day then
[illegible]

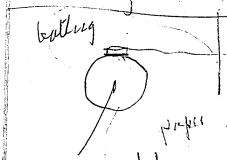
then plate over Copper
or Ni over grade.
wash dry — here we
will prob have a
[illegible]
[illegible]

Put best of all such [illegible]
polish [illegible]
and a melted buffing
between 2 plates plate.
melted wax & Copper plate
see what is given off
& or what use plate &
some other metal ideas

Induction Coils -
thermo - try Mercury
+ many cells so get
Current flow

Ethers

Use the big break wheel the Coarse wire spool, The dark box & Zinc rod & also the foil on glass rod get sparks in old way ~~[illegible]~~ with hoop adjustable around dark box use iron Zinc & after get spark put in stone if get nothing use EMG if nothing - put in rectifier A EMG - use stone If Cannot get anything & yet get spark then multiply till find out what it is & also strength there is, also use electrom

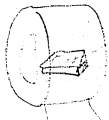


Make flakes Shellac Sle & tetrachloromercurithiolane & also Dinitrobenzol — Naphthalin so if sequence time to crystallize out & see if they comes from them —

Also Melted Anhydrous Salts powder out to form flakes

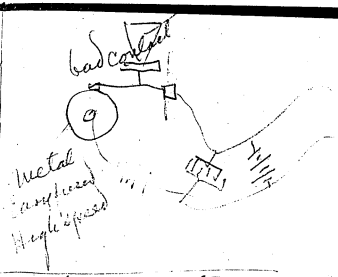
$AgNO_3$	MP 217 c
$HgBr_2$	242
$LiNO_3$	267
$HgCl_2$	293
SbF_3	292
$NaClO_3$	302
$NaNO_3$	316
KNO_3	339.

Maybe clock given by iron which magnetized well given off x ray etc



xyz Rico

powerful electromagnetic currents



Pack CuO plates in Hamilton or magnetite

platten Gegenstrom 1/32
~~opp Metall 1/16 opp Cu~~
between 2 platten
room in very dark
room – Spark Coil
Current there also
Strength Voltage see
Lilienwald

see if helix or Electrofelin
of a Capacitating tube Effect
the height —

one ft long wire wire in
helix one end fastened and
other end touching a wire
fine. Sends electricity etc
Listening audion —
also try other metals —
+ Materials —

Investigate rapid appearance
of heat at extreme end of
a bar of aluminum
when the other metal
end is [illegible]
or [illegible] —

Try Bone black cylinder
Emq —

Make Telephone Receiver with
pure annealed iron, see if
it works if not try ways of
making it work

Make Condenser Lake and
flakes old jewelry Lyman

get peculiar sis

Dinny take place Pupils
Coils —

Open up Wehr Condenser
see how its made —

Patent Arsenite Soda for stripping Ni from Copper -

Patent Etches

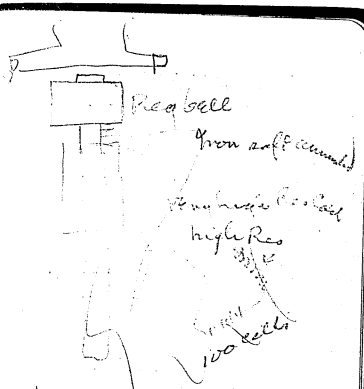
Dry Slaked lime exhausts [illegible] impure air and my electrical - Eng -

Cadmium Hydroxide - Nickel [illegible] Manganese & ous Oxides [illegible] Oxide.

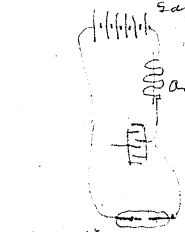
Bismuth hydrate -

Ignited Aluminum Oxide

~~[illegible]~~



to magnetize iron but [illegible] frequency Coil so high Res that 95% goes into Reg Coil - if this is OK it will provide field for Magnetic [illegible]



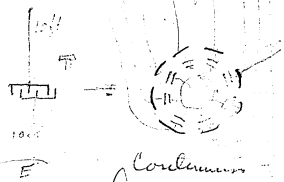
adjusting impedence -

Buy trial special book on Induced record act only sold to subscribers

Try Recipe Lead of Induced act boiled - + flock with clay chalk etc

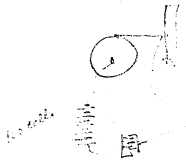
See Watts Dic. Inorganic acid
1 pt fumed acid 2 pts
Nitric Concd with
4 pts water heated
Quartz up, gives nitrous
gas & dried to tough
elastic resin —
gives other methods

Phosphorescing
Non Conducting Dielectric
between metal plates see
action of Light & Current
on electrodes



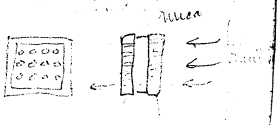
Condensers

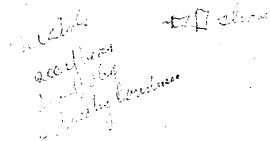
Wire at right angles to E & the
magnetic lines. Construct of 50 micro
farads — 40 cms × 40 cm Wire cut, lines
due to rotation of armature, plus condens



with this a magnetism is aware

a & c Vibrating close together
no non-electrolytic cond.
Electrolytic b is a plate grid
see if any amplification



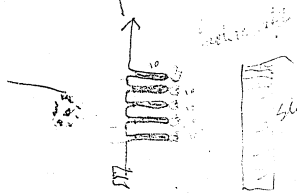


Phone = 6X6 Kinetoscope
Connected.

Make some tests on Emg
closed in with wet
sponge — running & still

Disc = to Cure Dull ones
Try more or less pressure
on Cinch than usual.

Try planting without
Parcelling —

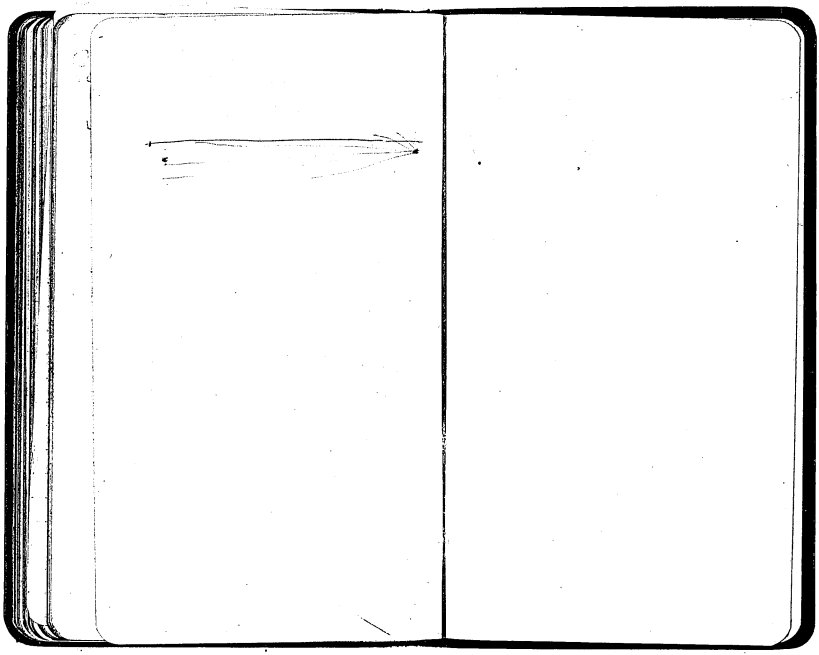


Patent the Good-Lapid abt
Cuvette from question —
of Dallmeyer works patents that
[illegible]

Harmony
Materials — Crystals
Cut in thin sheets that
pass when see if in phase
Phenomena — also Alternating
Currents —

Astronomical autoclave
Mix Chemicals and oil
& Resin together &
polymerize the resin
O.C. — Dallmeyer Lenses
with hands & other
optical parts

Make some Selenite by
Double Decomp from
Selenite & Sodium
Lime & Ba In die for EMG —

Rotating alternator
Anchor possibly from
Orient Magnetos of
soft iron by very small
magnet — Theory just
Experiments make adjp
may work with very
very weak lines —

find that book which describes
a magnetic anchor
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